

File  
Contract No.

January 23, 1964

ABD-4 Roll Film Dryer

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The ABD-4 is an air bearing dryer for use with the existing HTA/2 Film Processor. It replaces the old dessicant dryer which was not moved from the old location.

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██████████ is doing the test work on it and he is doing a thorough job. The machine is tracking well except for tracking over the output vacuum roller. This appeared to be inadequate tension as the film came off the air bearings. Jack experimented with tension rollers just ahead of the Vacuum roller but it did not solve the problem completely. So, he did two other things, and ~~eliminated~~ eliminated the tension rollers. First he ground the vacuum roller ~~so~~ so that it was perfectly cylindrical to half a thousandth of an inch. Next he improved the flow of air in the plenums so that the air pressure at the bearings increased. Thus he could increase the resistance on the dancing roller so that the film would have increased tension as it was fed to the recalcitrant vacuum roller. There was a 90% improvement in tracking. He is going to try to get further improvement by adding a slight taper to the ends of the vacuum roller. The tapered rollers have been successfully used in their storage and retrieval equipment.

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The vacuum rollers do not have teflon coating, they are 316 stainless. At present, ██████████ has no plans to add teflon coating to the rollers. It is possible that the thin base film could stick to the entering vacuum roller if it were tacky instead of wet when it entered. This problem was encountered on the HTA/5. There should be no problem with the exit vacuum roller since the film will be dry as it passes out of the dry box and over this roller.

Jack has put 150 to 200 hours of running time on the machine. His longest continuous run was 8 hours. He has no trouble drying SO278 (now called 8430) at 15 fpm. This is pretty good for a dryer that size. When he gets it tracking to his satisfaction, he will run 70mm, 5 in. and 9 $\frac{1}{2}$  in. film, thin base type.

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Declass Review by NIMA / DoD

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2001/08/13 : CIA-RDP78B0474A001000060043-5

January 28, 1964

Digital Readout ComparATOR

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The first unit was shipped to [REDACTED] on Friday January 17. Its arrival was confirmed on Monday by telephone to [REDACTED]. The only operation which [REDACTED] was not able to check was the "acknowledge error receive". He used a bit by bit simulation of the error word, but he was not able to simulate the dataphone of the error word because they have no dataphone.

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The second unit is built and being checked. [REDACTED] says the checkout is going much faster on the second one and he should be completed with it by the end of the week. There will be a delay in completing it however because switches went bad. During checkout of the front panel, 2 of the 5 readout character switches developed an open circuit in the Normally Open position. [REDACTED] has ordered replacements from [REDACTED] but they won't get in until Feb. 5. In addition, the mounting tabs on the alarm reset switch were broken. A replacement was also ordered from [REDACTED] which will be in at the same time as the other switches.

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An instruction manual was shipped with the first unit and a copy will also go with the second unit. A third copy of the instruction manual is available. If you would like to have that copy, [REDACTED] just ask [REDACTED] for it. He will be glad to send it to you. The manual has a complete set of schematics.

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When the counter sends a message to the computer, it waits for an answer. If an answer does not come in 3 seconds, an alarm rings. The waiting time is governed by an RC delay circuit, I meant to say decay circuit. The time can be changed by changing the capacitor. For 3 seconds they are using a 10 MF 25 V capacitor. It is on board 2827-515 and is shown on schematic 2827-115. As you know, John, the time is directly proportional to the capacitance, so you can change it easily if you wish.

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[REDACTED]

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[REDACTED] has started fabrication of the Master driver pattern, and they are committed to complete on the March 19 date which was established last December. A purchase order was sent to [REDACTED] last Friday to make the production driver from [REDACTED] master.

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[REDACTED] quoted 4 weeks to do this.

So the program is pretty well on schedule now and the mid-July completion date looks pretty good.

Now they have to get on the ball on the electronics items. They can't let them slip along any more or they will become pacing.

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When [REDACTED] gets one cycle of the pattern generated, he will send a copy to TC. They will send it over to [REDACTED] for measurement.

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[REDACTED] showed me a description of a film reader they expect to be making for White Sands soon. It has some of the basic features you would want in a measuring engine film reader for [REDACTED]. [REDACTED] will be glad to send you the description, [REDACTED] if you would like to see it. Just ask him for it if you want it.

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The Telecordex and equipment you have on order from TC is scheduled for delivery March 6 according to the contract. Their production report says they are a few days ahead of schedule, as of Jan 24.

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[REDACTED]

*Sub 45 Feb 1*

[REDACTED]

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